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Centralized Purchasing Power: Why Air Force

Leadership Should Care

Funding Support: Capabilities-Based

Programming



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funding and purchasing logistics

Centralized Purchasing Power: Why Air Force Leadership Should Care Funding Support: Capabilities-Based Programming

This edition begins with "Centralize Purchasing Power: Why Air Force Leadership Should Care." In this illustrative piece the authors make a number of valid points. Meaningful institutional change toward centralized purchasing fundamentally can improve the Air Force's effectiveness and efficiency. Using the commercial best practice of *commodity* councils, Air Force contracting has the opportunity to transition to a construct of strategic leverage quickly while minimizing the negative impact of radical change upon overarching Air Force operations. Within today's contracting structure, the basic hierarchy already exists, which could support this recombination of people, networks, culture, processes, and structure. The senior contracting representatives within the Air Force's headquarters and major command structures could transition easily to more strategic roles if the Air Force focused the appropriate level of attention on this issue. Air Force contracting has to move beyond tactical sourcing and compliance-oriented oversight, and contracting personnel have to get in front of user's requirements and be prepared to respond to customer requirements via a quick, seamless, and transparent methodology. Immediate further study is warranted in this regard.

The second feature, "Funding Support: Capabilites-Based Programming," looks at the question "Can a method be developed to assist squadron and group logistics commanders to secure required mission funding?" The author's answer is a resounding yes. Squadrons and groups must invest time and thought to compete effectively for funding resources at the MAJCOM, Air Force, and DoD levels. In other words, they spend the time to determine the requirements necessary to support the peacetime and wartime missions as well as the thought in applying the financial resources in a traceable manner. The key is to establish the fundamental requirements supporting the peacetime and wartime missions. When established, the requirements clarify not only the shortfalls identified from the logistics perspective but also mission impact to senior leadership. Once leadership understands the implications to the mission, more effective prioritization of resources throughout the unit is achieved more easily.

Editor's Note—Prologue to "Centralized Purchasing Power: Why Air Force Leadership Should Care"

In May 2004 when Majors Reese and Pohlman completed, "Centralized Purchasing Power: Why Air Force Leadership Should Care," the Air Force had just completed a 14-month effort to reengineer Air Force Materiel Command (AFMC) sustainment business processes. This transformation effort, culminates several years of aggressive change to AFMC's sustainment acquisition processes—strategic sourcing, purchasing and supply chain management (PSCM), and

commodity councils. AFMC developed a roadmap for commodity councils including organizational design, resource requirements, position descriptions, training requirements, and a spiral implementation plan. Since February 2004, they have stood up eight sustainment commodity councils. These councils are focused on support equipment, secondary power, propulsion, landing gears, aircraft accessories, instruments, electronics/communications, and aircraft structures. The spend for them ranges from \$334 for the Secondary Power Commodity Council to more than \$4.2B for Propulsion. Overall, the eight commodity councils manage 91.9 percent of total AFMC sustainment dollars (\$10.3B for fiscal years 2001-2003).

AFMC's initial strategic sourcing efforts resulted in the award of 28 contracts. One example is a contract awarded to Hamilton Sundstrand to support Air Force and Defense Logistics Agency managed items. This award reduced the total number of contracts for these items from 224 to 1, reduced acquisition lead time from 106 to 10 days, and reduced prices by 10 percent. It's expected the savings will be \$116M over the life of the contract.

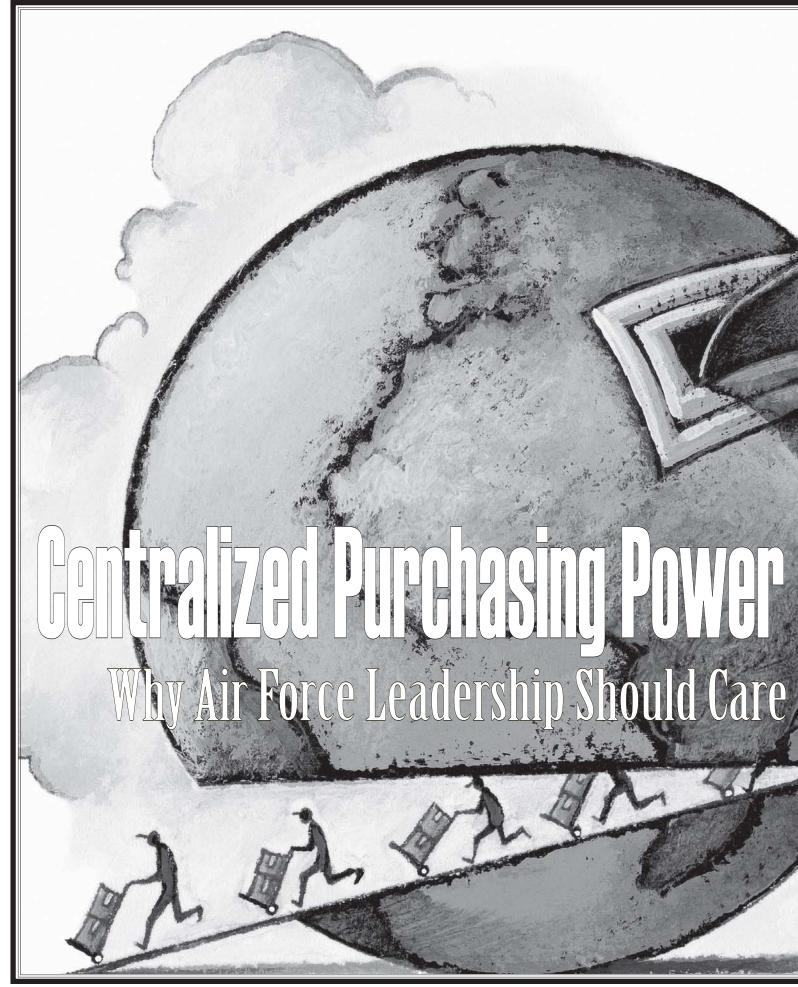
The Support Equipment Commodity Council reduced proliferation of oscilloscope configurations from 190 to 3. Total contracts have been reduced from 14 to 1. The Secondary Power Commodity Council is executing a strategy whereby a supplier provides all auxiliary power unit support to AFMC's organic depots on a fixed hourly basis, including parts This reduced the number of repair contracts from 83 to 5.

AFMC is also actively participating in establishing Department of Defense-level commodity councils for bearings and microelectronics.

At the Air Force level, improved strategic sourcing includes establishing Information Technology and Medical Services Commodity Councils.

Another important element of PSCM is improving supplier relations. Under the Strategic Supplier Relationship Management (SSRM) initiative, AFMC assigned senior civilians to manage the relationship with its top 21 suppliers. These suppliers represent approximately 92.5 percent of AFMC's total spend for spares and repairs. In Aug 2004, General Gregory Martin, AFMC Commander, convened a Strategic Supplier Executive Summit with senior executives from the Top 21 suppliers, air logistic center commanders, and the senior civilians involved in the SSRM initiative to share his vision concerning supplier relationship management and commodity councils. The second Strategic Supplier Executive Summit is scheduled for Oct 2005. Its purpose will be to review progress and introduce a supplier scorecard.

AFMC is on the path to meeting Air Force transformation goals—20 percent reduction in materiel costs, 20 percent increase in materiel availability, and a 50 percent reduction in cycle time.





Major David L. Reese, USAF Major Douglas W. Pohlman, USAF

Introduction

Ten years ago when IBM and its procurement competitors were vertically integrated, procurement was not mission critical. It was doing tactical buying. Today procurement is strategic. Buying professionals went from being



guardians of secret information to facilitators of communications among manufacturing, engineering, and suppliers' people and their suppliers. We have learned to communicate and team across divisions. As a result, we are much stronger. We truly have come a long way.

-R. Gene Richter

During the final 2 years of a highly successful life, characterized by service before self, Gene Richter, "One of the great figures in purchasing and the supply chain of the Twentieth Century," graciously dedicated a great amount of his valuable time in patriotic service to the Air Force's procurement transformation efforts.1 Serving at the procurement helm for Ford Motor Company, Black & Decker, Hewlett-Packard, and IBM, he developed an unmatched reputation for success, with his last three organizations each winning *Purchasing* magazine's Medal of Excellence—the commercial procurement community's highest honor.2 With more than 40 years of unequivocal procurement success to support his winning purchasing philosophy, Richter's message to the Air Force's contracting community was identical to his message to the commercial CEOs of today's medium and large corporations: "Centralize procurement!"3

Although Richter's years of proven experience alone justify the Air Force's seriously considering his message of centralized procurement, the overwhelming record of success from companies around the globe also endorses his guidance. As outsourced goods and services continued to grow as a dominant factor of revenue spend over the last several years, many successful CEOs realized the strategic value of highly focused procurement organizations within their corporations and are now demanding *assertive energy* from supply management leaders.⁴

In addition to the evidence of numerous public reports on the savings achieved by centralized procurement initiatives within major corporations around the globe, the US General Accounting Office's (GAO) September 2003 report on service contract management concurred that leading commercial companies are saving "10 to 20 percent of their total procurement costs" while

improving their competitiveness and customer service through strategic purchasing efforts.⁵ Under Richter's guidance, IBM certainly experienced the inherent value of strategic procurement after revamping its purchasing department in the mid-1990s to stop the company from *bleeding red ink*, ultimately helping return the company to profitability.⁶ After all, the impact of strategic purchasing on a company's bottom line is clearly evident when you consider that a dollar saved in purchasing costs is a full dollar of resources that an organization can employ elsewhere.

Beyond the obvious advantages of leveraged buying power, strategic procurement is a key enabler of effective supply chain management (SCM). Motorola's Personal Communications Sector, the world's second largest cell phone manufacturer, acknowledged this often-overlooked fact as it placed Theresa Metty, one of the nation's top-ranked purchasing professionals, in charge of its SCM function in 2000. Through Metty's campaign to reduce supply chain complexity and leverage centralized purchasing power, Motorola PCS successfully increased its market share, "squeezed \$2.6B in costs out of its supply chain, reduced inventory by \$1.4B, and improved its customer response time 40 percent" in the following 2 years. 8

Metty, who was promoted in 2003 as Motorola's senior vice president and chief procurement officer, introduced the centralized commodity council concept at Motorola PCS, better equipping the organization to stay ahead of economic developments, technology shifts, changing demand, supply restrictions, and bottlenecks. Since 2002, Metty also has volunteered her acclaimed expertise to senior Air Force procurement executives. Her message, like Richter's, has been for the Air Force to capitalize on the intrinsic supply chain value of strategic purchasing by centralizing procurement functions across the service.

Despite the overwhelming evidence of proven success within the commercial marketplace and the declining health of the Air Force's increasingly complicated supply chains, most Air Force personnel are unaware of the potential that increased centralized procurement offers in terms of effectiveness and efficiency. 10 Within the commercial purchasing world, the "pendulum swings every few years" between decentralized and centralized purchasing functions, often because of external influences of market responsiveness and organizational empowerment.¹¹ However, the business side of the Air Force consistently has fixated on the doctrinal mantra of decentralized execution, showing little application for the concept of centralized control, except within discussions regarding the allocation and application of airpower employment assets (that is, weapon systems).12 Many operational persons who are aware of the integrated supply chain potential may oppose the perceived increase in execution control by headquarters or other agents simply because of this embedded cultural mindset within the Air Force.13

Because of the overwhelming complexity of the multifaceted logistics issues of today, the Air Force certainly has the right to be leery of yet another improvement initiative promising relief from longstanding concerns. Such skepticism, resistance to change, and resistance to external controls are natural and healthy traits of any large organization. However, the Air Force must ensure its longstanding attachment to decentralized operations is not yesterday's answer to today's problems. ¹⁴ When

the preponderance of evidence is overwhelmingly in favor of centralized procurement and when the cost for failing to transform reaches an unacceptable threshold of tolerance, the time for organizational resistance is over.

Despite several years of effort to gain better control of its large and growing purchasing machine, the Air Force's pace toward leveraged buying is still bureaucratically slow. 15 Centralization proponents would argue that Air Force leadership must pay increased attention to this issue of strategic purchasing.16 Given the size and scope of Air Force supply chain activities and the highly decentralized nature of the organization itself, any successful effort toward increased centralization will require executive sponsorship since they have the "ultimate responsibility for strategy, structure, and culture."17 Although the savings promised by such an initiative should be reason enough to garner leadership's undivided attention, this issue is not simply about efficiency. More important, as Air Force leaders should note, this concept of leveraged centralized purchasing power is fundamentally about increasing the Air Force's warfighting effectiveness.¹⁸

Notably, successful centralization of the procurement function within the Air Force's highly decentralized supply chain network will have wide-ranging effects on the organizational structure of the Air Force tomorrow. As with every large and multifaceted organization, there are right ways to centralize control of critical operations, and there are wrong ways. ¹⁹ Every enterprise is potentially unique. As such, Air Force leaders must be aware, not only of the operational promise but also of the organizational impact. Failure by the Air Force's senior leadership to appreciate the underlying implications or failure to support this issue likely would compromise any potential improvements in capability. ²⁰

Centralization Trends within the Commercial Procurement Community

[The big conglomerates] in effect, said, "We can't centralize purchasing, we'll have to let every plant have its own purchasing activity." Those days are over. They're over because the most successful and most competitive companies are now putting a strategic value on supply. That's why I report right now to the chairman of the company. I think one of the things we're seeing in American business is a resurgence in the strategic nature of purchasing. And to do that, we've got to get out of transactional buying.

—Tom Stallkamp

During the 1970s and 1980s, the executive management teams of large, sprawling, and growing enterprises mitigated the effects of their enormous and complicated supply chains by diversification and decentralization.²¹ Large corporations segmented their operations by divisions and gave considerable execution power to their decentralized business units, as previously expressed by Tom Stallkamp, former vice president and chief procurement officer for Chrysler Corporation. Within these business units, many plants and offices gave similar latitude and control to individual functional silos (for example, engineering, purchasing, inventory management, manufacturing, and marketing sales) within their overarching processes. Because of the inevitable *conflict and suboptimization* resulting from the

fragmented processes characterized by no single entity's being clearly responsible for final products, total quality management and process advocates, such as Michael Hammer, arrived on scene in the 1990s arguing for the reengineering of business processes to better provide an end-to-end focus.²²

Purchasing Today

From a process viewpoint, the purchasing function is extremely critical because, "perhaps more than any other group, supply managers can affect quality at the source because they actually determine the source for most supply chain inputs."23 Acknowledgment of this basic fact led many organizations in the 1990s to encourage their functional stovepipes involved in the procurement process to increase the cross flow of information among organizational silos. As a result, the purchasing function became more visible within the larger structure of organizations.²⁴ Engineers began to work with procurement personnel earlier in the design stages to ensure technical specifications were scoped and understood correctly, purchasing officers began to encourage increased supplier participation in the design process to prevent unnecessary technical problems, and inventory management personnel began to share information with purchasing personnel to help eliminate supply shortages and overages.25 Today, such collaboration between supply chain participants is increasingly normal in business operations.

Beyond the obvious benefits created by the basic integration of previously fragmented processes, however, the purchasing communities of large corporations found a tremendous amount of supply chain waste within their own functional silos because of decentralized practices across the corporation. At the most simple level, one can contrast decentralized buying to the economics of buying in bulk. If a purchaser needs the same item over and over again, it typically will get a better price by buying in volume rather than from buying items individually. If the purchaser consistently gives its business to the same supplier, that supplier is more likely to offer better terms and pricing than a supplier used only sporadically.

Certainly, *economy of scale* is not a new concept. Farming cooperatives, distributors, third-party logistics providers, and buying consortiums are all examples of using the power of combined individual needs to gain leverage. Most individuals also are aware of the power of financial consolidation and leverage. They utilize mutual funds to gain the additional financial leverage of other people's money, and they contribute to 401K investment opportunities to team their money with that of fellow workers. They shop at Costco and Sam's Wholesale to get better pricing from bulk purchasing, shop at Wal-Mart to benefit from the low pricing offered by an incredible sales volume, and (perhaps most basically) understand the value of buying 12-packs versus 6-packs. Individuals understand the power of leveraged purchasing in their personal finances, and leading corporations are keenly aware of the leverage buying advantage as well.²⁷

Accordingly, CEOs and other business executives are looking for their procurement organizations to contribute directly to the financial bottom line, and smart purchasing personnel are finding ways to translate their organization's return on investment into language that the CEO can understand and appreciate.²⁸ After all, if the purchasing function is not able to measure its contribution objectively to the success of the larger organization, it is not likely that the organization will believe in or support the procurement

Article Highlights

The Air Force's pace toward effectively leveraging its \$69B purchasing power is bureaucratically slow.

n the face of commercial success with centralized procurement efforts, most Air Force members are unaware of the potential increase centralized procurement offers in terms of effectiveness and efficiency, Highly successful procurement executives have advised Air Force leadership to realize the value of strategically focused procurement and to demand more from their supply management leaders to stay ahead of economic developments, technology shifts, changing demand, supply restrictions and bottlenecks. A strategic approach is necessary to correct underlying supply chain issues and to better stretch declining resources toward effectiveness and efficiency goals.

function's initiatives.²⁹ Although the nuances of supply chain improvements are not always clearly evident, executives do understand monetary savings and performance improvements and will support the motivated efforts of procurement organizations, bringing solutions and savings to the corporate table.³⁰ Effective leaders of purchasing functions contribute directly to the success of their organization and find meaningful ways to communicate their performance to the strategic business level.³¹

In the world of rising material and capital costs and increasing competition, today's medium and large organizations consistently are finding savings opportunities throughout the spectrum of purchased goods and services. 32 Moving from decentralized to centralized purchasing, the *economy of scale* principle nearly always holds true, and the intrinsic benefits of supply chain optimization afforded by better control and integration of functional activities involved in the procurement process are creating a positive influence on the financial bottom line. Successful organizations consistently are translating those efficiency savings directly into increased effectiveness and are gaining the attention and support of senior leadership along the way. 33

Snapshots of Centralized Success

The following selected vignettes offer a small glimpse into the power of leveraged spending that leading corporations around the world have experienced recently (Table 1).

Sanmina—SCI Corporation. As an electronics contract manufacturer within a \$125B market, Sanmina embraced the core concepts of supply chain management and increased its focus on the global supply base. In 2001, by emphasizing supplier selection, supplier management, supplier development, and technology convergence through a dedicated core of procurement and commodity experts, Sanmina reduced the corporation's inventory by almost 90 percent and nearly tripled its inventory turns. By continuing to attack the *islands of centralization* at its factory level, Sanmina projected continued improvements of approximately the same magnitude over the next year. The benefits of centralized procurement and integrated supply chain management are readily apparent, as its supply chain vice president testified, "We don't do a lot of part shortage meetings anymore." 35

ChevronTexaco Corporation. In 2001, ChevronTexaco (CT) created a center led strategic procurement organization with decentralized operational procurement organizations reporting directly to it and expanded the center-led focus from materialsonly procurement to materials, services, and logistics procurement. Utilizing strong top management support from the CEO downward, the resulting corporate leverage enabled CT's procurement organization to save 34.3 percent in oilfield trucking costs, 39.3 percent in office supply costs, 22.4 percent in office furniture costs, 31.1 percent in telecommunications expenses, and more than \$10.3M in information technology hardware. By consolidating suppliers, creating *competitive threat* with their incumbent suppliers, negotiating heavily, and obtaining tremendous consensus with its supply chain partners, CT also was able to save 18.5 percent in its refinery maintenance costs for its six US refineries. Notably, CT executed its consolidation and improvement efforts while also achieving outstanding goals in supplier diversity and small business utilization.³⁶

Leading industry firms are reducing purchasing costs radically—over and over again—year after year.

- Timken—10 percent reduction across safety supplies and then another 23 percent by consolidating spend via third-party firm.
- Whirlpool—\$200M reduction in a single year (15-20 percent targets).
- Ingersoll-Rand—\$300M (direct) and \$100M (indirect) savings achieved (average 17 percent—up to 50 percent in certain commodities).
- Textron—\$100M saved in purchase costs in 1 year alone.
- DuPont—\$400M (14 percent) first year—next year's goal = \$1B.
- Kodak-\$1.4B—double-digit annual productivity targets again.
- Englehard—25 percent productivity improvement goals per year.

Centralization and volume leverage are key factors!

Table 1. Successful Centralization Results34

Summary

Today's commercial procurement community is leaning heavily toward the organizational concept of centralized procurement. Although the large and medium corporations around the globe that are centralizing their purchasing efforts use several different organizational constructs, the overarching objective is typically the same. To the maximum extent possible, the entire organization should be corporately leveraging its purchasing volume and customer and supplier relationships through strategic planning and execution. Indeed, companies that are striving to ensure supply of critical goods and services are finding a decentralized strategy that promotes fragmented processes is fundamentally detrimental to their goal.

"Cost reduction is, hands down, the main reason" for centralization.³⁷ Beyond the amazing efficiency savings offered by leveraged spending, however, many companies are finding other motivations to centralize, including improved supply chain integration, product design and quality, manufacturing processes, supplier development, and ultimate customer satisfaction.³⁸ For example, to pull itself out of its downward performance spiral, Harley-Davidson (like many other companies today) discovered the key to success was "adopting beneficial relationships with suppliers and taking a strategic approach to purchasing," according to their chairman and CEO Jeff Bleustein.³⁹ Like many other successful CEOs today, Bleustein discovered the fundamental winning relationship between leveraged purchasing efficiency and overarching corporate effectiveness.

Air Force Contracting's Organizational Construct

The Air Force remains a more functionally oriented organization than the innovative commercial firms we studied. Hence it will probably have to expend more effort to bring relevant functions into an effective coalition for change and sustain their cooperation for the duration of the change.

-RAND

Across the wide spectrum of its operations, the Air Force depends heavily on contracted goods and services. In fiscal year 2002 (FY02), for example, the Air Force's contracts totaled roughly \$69B. To put that figure in perspective, based on *Purchasing* magazine's 2001 estimates, the Air Force has the nation's third largest purchase spending when compared to commercial North American corporations; only Ford Motor Company and General Motors spend more (approximately \$90B and \$86B, respectively). 41

The active-duty Air Force's large contract spending is spread over 84 major installations and 82 minor facilities. ⁴² Collectively, this contract spending supports 9 major commands, 35 field operating agencies, 4 direct reporting units, 508,000 active duty and civilian personnel, more than 4,416 fixed-wing and rotarywing aircraft distributed across 42 major aircraft types (many with multiple models), and dozens of individual weapon systems across a wide technological spectrum from space launch vehicles to handguns. ⁴³

Of the Air Force's \$69B contract spend, the Air Force expends approximately \$50B itself directly through organic contracting offices, while relying on other services or agencies (for example, Defense Logistics Agency and General Services Administration) for the remaining \$19B in contract support (Figure 1).

Strategic Purchasing Spend Analysis

As detailed in Figure 1, contracts greater than \$25K compose the majority of the Air Force's contract spending. These contracts were valued at \$47.4B in FY02. (Defense Department Forms 350 are the mandatory reports for contracts valued at \$25K and greater.) Contracts written for less than \$25K make up a significantly smaller portion of the Air Force's spending—\$515M in FY02. (DD Forms1057 are the summary reports for contracts valued at less than \$25K each.)

Government Purchase Card Program

The Air Force's most highly decentralized spend is found within the Government Purchase Card (GPC) program. Basically, the GPC program provides credit cards to individuals within organizations across the full range of Air Force organizations for select purchases, typically below \$2.5K. The vast majority of these individual cardholders are not within the Air Force's contracting squadrons or other designated purchasing organizations. Like many other commercial companies, the Air Force uses this purchase card program to streamline the procurement process for small, commercially available purchases. As noted in Figure 1, the Air Force's GPC spend was approximately \$1.6B in FY02.

However, unlike most commercial companies, the Air Force's GPC program is extremely large. In FY02, the Air Force had more than 77,000 individual cardholders who, collectively, were responsible for more than 3 million purchasing transactions valued at \$1.6B.⁴⁵ In fact, GPC transactions accounted for 97 percent of the Air Force's 3,246,121 contracting actions in the most recent reporting for FY03.⁴⁶ Most important, however, the GPC program is largely void of any underlying strategically sourced agreements with common suppliers and is virtually unsupported by any Internet-based procurement tools (that is, e-Procurement) to help the Air Force efficiently execute and control this largely decentralized buying methodology.

Large Contracts

Although the Air Force's GPC spend is enormous when compared to that of most companies, the Air Force spends the majority of its money via large contracts executed by its professional purchasing organizations. Looking at the contracts valued at \$25K or more, in FY02 alone, the Air Force spent approximately \$47B. Since nearly every major Air Force installation has at least one major purchasing office and since nearly every installation is largely responsible for its own independent base operations and support, the Air Force spreads this \$47B widely across the institution in terms of decentralized sourcing. In fact, 235 uniquely identified purchasing organizations were responsible for this \$47B large-contract spend in FY02.47 As depicted in Table 2, these many organizations collectively execute thousands of contracts with thousands of suppliers buying many different types of goods and services (as depicted by the numerous NAICS codes).

For further analysis regarding centralized versus decentralized sourcing control, it is worth noting in FY02 that the Air Force awarded 47 percent of its large contract spend and 35 percent of its large contracts via sole-source methods (that is, where only one supplier was considered for contract award).⁴⁹ Also, looking at all the new contracts awarded in FY02, 34 percent of the suppliers had multiple Air Force contracts (including one supplier with 197 different contracts Air Force-wide), and 24 percent of the suppliers did business with more than one Air Force contracting office (including one supplier who did business with 56 different offices).⁵⁰ When you further consider that larger corporations may have many different contractor identification codes within their extended organization, the picture of fragmented supplier leverage is even more readily apparent.

Commodity Fragmentation

The Air Force's purchasing construct is further illustrated by analyzing the fragmented spend patterns within individual commodity groups (Table 3).

As validated by RAND's full analysis, the supply classifications in Table 3 are virtually representative of every commodity grouping across Air Force spending. Many Air Force offices are buying similar items nonstrategically, utilizing many contracts with many contractors. The data also suggest the

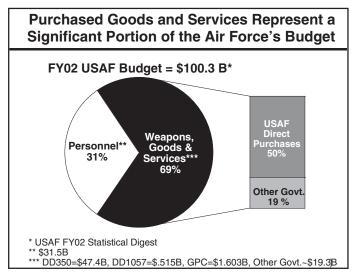


Figure 1. Air Force Expenditures⁴⁴

collective value of Air Force purchases is rarely evident, as individual contracting offices have little insight into the purchasing actions of competing decentralized offices across the Air Force. Full awareness of specific commodity spend is possible only by conducting a detailed, enterprise-wide spend analysis—a capability that is severely limited in the Air Force today.⁵²

Fragmented Supplier Relationships

Although the Air Force spends the majority of its money with a relatively small group of key suppliers, its organizational construct fosters fragmented relationships with these strategic suppliers. While examining this picture of decentralized supplier relationships, Richter warned Air Force leadership, "Suppliers are experts at exploiting those relationships. On the other side of the table is someone making four times as much money as you, and they earn that by exploiting differences." 53

Richter's expert advice was for the Air Force to interface with its supply base with a single strategic policy and vocabulary. Such a strategically managed relationship is "different than a myriad of folks following the same general guidance but doing it differently." Analysis of the spending data with its key suppliers (Table 4) suggests the Air Force is managing its suppliers by individual, written contracts. Unfortunately, this tactical method of managing key suppliers is a well-established bad practice. Today's most effective purchasing organizations are finding that strategic relationships with their key suppliers yield optimal performance.

Commercial Airlift Augmentation—A Success Story

As previously mentioned, *pockets of excellence* within Air Force contracting do exist. Perhaps the greatest example of strategically leveraged purchasing is the Department of Defense (DoD) commercial airlift augmentation program, primarily executed by the Air Mobility Command (AMC). This program for procuring airlift services during both peace and war is focused strategically from beginning to end and is indeed a good example of an effective centralized procurement strategy.⁵⁷

Beginning with the national airlift policy (last affirmed by President Ronald Reagan in 1987), the DoD institutionally is mandated to keep its organic airlift fleet minimally sized and to rely heavily on the commercial airlift fleet.⁵⁸ Reinforced by several policy prescriptions, the department only procures peacetime airlift from safe commercial air carriers that also contribute to the DoD's emergency airlift capability through fleet commitments to the Civil Reserve Air Fleet (CRAF) augmentation program.⁵⁹ Coupled with key oversight levels (for example, the Commercial Airlift Review Authority, the Commercial Airlift Review Board, and the Air Carrier Survey and Analysis Office), DoD closely manages the overarching airlift procurement strategy.⁶⁰

When buying commercial airlift, AMC uses 5-year CRAF memorandums of understanding to outline the basic principles and to set the rules for how payment rates will be determined. Then annually, AMC conducts an annual fixed buy for specific requirements and an expansion buy for anticipated but unspecific requirements. In receiving business from DoD, the carriers' entitlements for peacetime business are based on their participation in the CRAF. In effect, carriers who commit more wartime support to the CRAF are entitled to receive more peacetime business from DoD. The carriers who commit more wartimes support to the CRAF are entitled to receive more peacetime business from DoD.

In fact, virtually the only way to be allowed to participate in the large peacetime commercial airlift program is for carriers to participate in the emergency augmentation program. The CRAF's financial *hook* gets the carriers on board, and their compliance with mandated operational readiness and safety programs ensures their continued participation. Poor performance during fixed-buy requirements may impact a carrier's ability to participate in the expansion business. Carriers who provide consistently reliable service are entitled to receive more expansion business than poorly performing carriers.⁶³

In short, the DoD commercial airlift program is very strategically focused. DoD controls virtually its entire airlift spending through a single organization, and the sourcing method is heavily dependent on the underlying value and risk of DoD's entire airlift program, from peace to war. The Air Force has rationalized its supply base strategically (only safe CRAF participants get to play) and closely manages the commodity through strategic programs built on a solid foundation of senior executive oversight and direction. The Air Force maintains impressive visibility into the program through onsite financial and safety surveys, check rides, range rides, and daily flightfollowing efforts.⁶⁴ The oversight is tempered with an integrated organizational construct that requires close coordination between transportation, safety, and contracting representatives with its supplier base—the carriers. As such, the commercial airlift program is a great example of the power of leveraged spending controlled by a centralized process. Unfortunately, the strategic procurement of airlift is the exception, not the rule, for Air Force purchasing.65

The Supply Chain Linkage

In my bible, it says that the love of hand-offs is the root of all evil!

-Michael Hammer

During the tumultuous decade of the 1990s, a multitude of complicating supply chain factors seriously strained the effectiveness and efficiency of Air Force weapon systems. In fact, from 1991 to 2000, the mission-capable rates for Air Force weapon systems declined in aggregate by 10.4 percent. 66 A significant factor of this decline includes the aging health of the Air Force's fleet. 76 In FY01, the average age of its weapon systems was 22.2 years. As a result, reliability and part obsolescence issues became major readiness drivers. Further complicating the support of its aging aircraft and systems, the budget reductions of the 1990s and internal funding priorities led the Air Force to fund only 82 percent of its self-computed spare parts requirement. 68

Not surprisingly, the Air Force's total not mission capability supply rates increased by 5.6 percent alone during the decade. Aggressive inventory reductions executed by the Air Force also influenced this rate increase, since during the 1990s the Air Force cut its inventory of spare parts by 64 percent. ⁶⁹ Unfortunately, the Air Force did not target its reductions scientifically, in many cases simply truncating complex algorithms for spares calculations, across the board with little regard for optimizing effects. ⁷⁰ Coupled with the major organizational and process changes during the decade (including the objective wing structure reorganization, the Base Realignment and Closure depot shutdowns, the transition from three-level maintenance to

two-level maintenance, the transfer of consumable spares management to the Defense Logistics Agency, and radical changes in the customer pricing structure for spares sustainment), the Air Force placed a great strain on its supply chains in a relatively short amount of time. ⁷¹ Unfortunately, most of these radical adjustments were aimed at efficiency—not effectiveness—as demonstrated by the 10-point drop in Air Force mission-capable rates during the 1990s.

Personnel reductions and retention problems certainly impacted weapon system readiness, too. During the decade, manning within the midlevel aircraft maintenance community dropped from 103 percent to 74 percent. Beyond the readily apparent implications of reduced experience of the Air Force's skilled maintenance technicians, the second- and third-level effects are certainly notable. As lesser experienced personnel without adequate supervision increased their role in the supply

chain, they likely decreased the quality of the maintenance decisions on the flight line and in the maintenance back shops. If this lack of experience contributed to wrongly diagnosed problems and incorrectly executed solutions, their increased role would have exasperated the waste potential within an already amazingly inefficient supply chain network.

The Spares Campaign

In light of this disconcerting readiness picture, the Air Force Chief of Staff endorsed a review of spares management processes in early 2001.⁷³ Following significant study and analysis, the Air Force narrowed its improvement efforts to eight overarching supply chain initiatives, and at the 2001 Fall Corona meeting, the Air Force's senior leadership overwhelmingly endorsed the eight initiatives of the Spares Campaign.⁷⁴ As supported by the analysis leading up to this decision, they advocated the need for radical change to transform the Air Force's fragmented sustainment processes.

Specifically, the Spares Campaign's Supplier Relationships Team identified six underlying SCM issues primarily responsible for fragmenting the Air Force's sustainment process, as summarized in Table 5. As is readily apparent, each of these issues is linked intrinsically to the purchasing process.

FY02 New Contracts Valued at More Than \$25K

- \$47B in Purchases
- 235 Different Purchase Office Codes
- 21.093 Different Contracts
- 10,130 Different Contractor Identification Codes
- 731 Different NAICS* Codes

*North American Industry Classification System

Source: FY02 Air Force DD 350 data

Table 2. High-Level Spend Analysis (Large Contracts)⁴⁸

FY02 Centralized Spend with Key Suppliers								
Firms	# Contracts	# Contracts Sole Source	\$(M)	% \$s Sole Source	# Contractor ID #s*	# Purchasing Office Codes		
Lockheed Martin	319	61	10,230	69	60	91		
Boeing	286	59	8,762	34	39	84		
Northrop Grumman	369	60	2,215	68	67	126		
Raytheon	251	60	2,115	63	46	78		
UTC	233	67	1,707	77	29	32		
TRW	66	30	1,230	7	23	51		
L-3 Comm Holding	98	55	871	82	25	44		
North American Airlines	1	0	622	0	1	1		
General Dynamics	112	49	529	25	24	63		
Dyna Corp	23	4	510	0	0	21		
*A moving target because of ongoing acquisitions, sales, and mergers								

Table 4. Air Force Key Supplier Management⁵⁴

Federal Supply Class	# Purchase Office Codes	Total # Contracts	# Contracts	Total \$s (Millions)
Office Furniture	91	407	258	\$95
Radio and TV Communications Equipment	79	142	92	\$114
Custodial—Janitorial Services	79	219	165	\$151
Misc Communications Equipment	77	246	184	\$255
ADPE System Configuration	76	246	184	\$255
Trash/Garbage Collection Services	74	136	100	\$61
Maintenance—Office Buildings	74	392	306	\$196
Maintenance—Other Miscellaneous Buildings	72	487	352	\$242
Maintenance—Other Administrative and Service Buildings	69	301	228	\$102
ADP Software	68	298	255	\$210

Table 3. Air Force's Fragmented Spend Pattern⁵¹

Purchasing and SCM Initiative

One of the most overarching supply chain initiatives within the Spares Campaign was the plan to adopt improved Purchasing and Supply Chain Management (PSCM) tenets across the Air Force's sustainment programs. The vision of this initiative was to increase weapon system performance and reduce total ownership costs by strategically integrating materiel management functions throughout weapon system supply chains. ⁷⁶ From this vision statement, it is clear the Air Force was directing the PSCM effort at both effectiveness and efficiency. The Pentagon focused the PSCM initiative on moving the Air Force beyond its unmanaged, crisis-driven, adversarial, and costonly business approach to a more strategically aligned, long-term, integrated, and collaborative partnership with its contractors. A key goal was to move the Air Force beyond its transactionfocused, data-limited, and poor analytical capability to a realtime, highly visible, interconnected, and flexible information capability across its extended supply chains from customers to suppliers.77

In terms of forecasting and demand planning, PSCM targeted the Air Force's informal *gut feel* requirements cycle by advocating for increased integration of key customers and suppliers into a more effective, cross-functional planning process. Rule above all, the PSCM initiative was focused on creating a more strategic approach to the complicated business of weapon system sustainment. Such a strategic approach to an institution-wide process naturally implies the concept of a *top down directed activity* or increased centralized control. The fundamental tenets listed in Table 6 demonstrate the end-state objectives of the PSCM initiative.

The Need for Strategic Focus

In fact, to address all six of the Air Force's underlying supply chain issues properly, PSCM advocated for a fundamental increase in the level of centralized control of the purchasing process, as demonstrated by the initiative's consistent *strategic* focus.⁸¹ Although the correct level of centralized control likely will remain a contentious subject between various individuals at headquarters and operational units throughout the Air Force's sustainment network, the consensus remains that fundamental change is required.⁸²

Within the Air Force Materiel Command (AFMC), the Air Force's primary organization responsible for weapon systems sustainment, only 4.4 percent of its 20,000 active spare parts and only 18 percent of its entire spares spending have been placed on any of its 12 strategically sourced contracts. Not surprisingly, the average cycle time for buying parts within this tactically oriented process at AFMC is 660 days, which equates into a pipeline inventory sink of \$1.4B. Admittedly, AFMC has \$6.8B in excess inventory, which by itself creates another annual bill of \$60M for transportation, storage, and transaction costs. ⁸³

Perhaps most directly reflective of the linkage between poor supply chain performance and the purchasing process (read operational effectiveness), up to 28 percent of AFMC's initial requests to its purchasing organizations arrive already inside the necessary production lead times.⁸⁴ In other words, by the time the Air Force realizes it needs a part, it is too late to request, make, and receive the part on time. Further exasperating the issue, once it does receive a contract, suppliers (including organic Air Force sources of supply) "are not measured or treated as strategic

partners."⁸⁵ Perhaps unfortunately affirming this section's opening quotation on hand-offs being the *root of all evil*, AFMC has no less than 199 different information technology system interfaces to manage this poorly integrated end-to-end process across customers, functional stovepipes, and suppliers.⁸⁶ More change still is required.

Increased Control of Air Force Purchasing

We trained hard, but it seemed that every time we were beginning to form up into teams, we would be reorganized. I was to learn later in life that we tend to meet any new situation by reorganizing—and a wonderful method it can be for creating the illusion of progress while producing confusion, inefficiency, and demoralization.

-Petronius Arbiter, Circa 210 BC

The evidence is very straightforward and concludes the Air Force purchasing construct is highly decentralized, both in terms of control and supply chain execution. The advice of industry's leading procurement experts, the lessons of successful commercial organizations, and internal fragmented spending and supply chain patterns collectively point toward the potential benefit of change within the Air Force's decentralized purchasing construct. Certainly, the preponderance of evidence suggests that

Underlying Supply Chain Issues

- A functional, stovepiped, and organizational focus is inhibiting weapon system sustainment.
- No one entity is responsible for managing the supply base and supplier relationships.
- Demand planning and replenishment actions are largely tactical rather than strategic.
- Visibility is poor among active participants in the supply chain
- Supply chain incentives are not aligned with strategic goals.
- Supply chain management education and training levels are low.

Table 5. The Air Force's Fragmented Sustainment Problem75

Synergetic Tents of PSM

- Purchasing and supply metrics aligned with operational goals
- Comprehensive knowledge of where the money is spent
- Full awareness and understanding of the supply chain
- Sourcing strategies tailored to operational value and risk
- Actively managed supply base
- Optimized supply base
- Strategic sourcing vice tactical actions
- Key suppliers managed strategically
- Linked demand and replenishment planning
- · Comprehensive supply chain visibility
- Supply chain aligned for optimal efficiency
- Integrated organizational constructs
- Strategically focused workforce
- Continuous improvement

Table 6. PSCM End-State Tenets80

a move toward increased strategic control of its large purchasing machine likely will make the Air Force more efficient and effective.

Historically, the Air Force has focused the majority of its procurement improvement efforts on major acquisition systems and technology programs. After all, these programs account for approximately 27 percent of the Air Force's budget and warrant such focus. Further, these weapon system programs are the big ticket and shiny new initiatives that politicians and other leadership naturally focus on. However, as even experienced acquisition personnel are often unaware, operational and sustainment spending accounts for the lion's share—more than 42 percent—of the Air Force's budget. Within this highly decentralized spending category, the Air Force could make substantial improvements in efficiency and effectiveness by taking a more strategic approach.

But, are the benefits of change really worth the effort? Will the Air Force (arguably, an already suffering victim of repetitive change syndrome) actually be able to make meaningful institutional change toward centralized purchasing given its business and operational slant toward decentralization? The obvious answer is, "It depends." Beyond the barrier of moving past a decentralized mindset, the Air Force will struggle greatly in overcoming the related symptoms of "initiative overload, change-related chaos, and employee anxiety, cynicism, and burnout," if the premise of repetitive change syndrome is accurate. Be the strategic benefits of transformation must outweigh the tactical cost of change, and the results must be tangible—not just an illusionary cloud of dust stirred up by the activity itself.

Certainly, the estimated monetary savings present a powerful argument for change. Although industry's leading procurement executives who have analyzed the Air Force's procurement process collectively argue the Air Force has above average waste within its heavily decentralized purchasing construct, an average industry savings target of 12 percent across operational and sustainment spending would bring more than \$5B back to the table for the Air Force's executive leadership. Even those doubtful of purchasing's impact on supply chain effectiveness can understand how a relative increase of \$5B could translate into increased warfighting effectiveness for the Air Force. After all, \$5B is grossly equivalent to 48 additional F/A-22 Raptor aircraft, 127 joint strike fighters, or 25 C-17 Globemaster IIIs. Not to mention, \$5B is approximately the entire Air Force's spares budget and is greater than the gross domestic product of 68 nations.90

Skeptics of achieving that level of success enterprise wide should remember, however, a 12-percent savings in *any* of the Air Force's many commodity groupings would be significant, as highlighted in Table 7. Meaningful change toward increased strategic control of even a few targeted commodity groupings could have a wide-ranging impact on Air Force operations.

Recommendations for Air Force Procurement

As demonstrated by many large successful organizations, a move toward centralized procurement is fundamentally critical to the success of the Air Force's operational supply chain, both in terms of efficiency and effectiveness. The harder part of this assertion, however, is the methodology: how can the Air Force replicate commercial success to achieve these operational goals? Given

the large and bureaucratic nature of its organization, a systematic reengineering of the Air Force's embedded supply chain processes promises to be too slow and cumbersome for meaningful change within an institution always *on call* for national defense. Destroying an old culture and creating a new one "is typically very slow—spanning years not weeks, requiring iron-willed persistence by the firm's leadership, and fraught with overt and covert countercultural resistance, often leading to backlashes that drive the firm to return to its old culture." A better path toward meaningful change for Air Force readiness would minimize destruction and disruption by using existing assets and "recombining them creatively in a new and successful fashion." There is no doubt that the Air Force's transformation efforts must transcend beyond the illusion of reorganization, as alluded to by this section's opening quotation.

The Commodity Council Methodology⁹⁴

Following Eric Abrahamson's concept of *creative recombination* and veering away from the more destructive tendencies of today's more popular reengineering techniques, the Air Force can enact the needed change by adopting industry's *commodity council* methodology. *Commodity council* is a term used to describe a cross-functional sourcing group charged with formulating a centralized purchasing strategy and establishing centralized contracts for enterprise-wide requirements for a specific category of goods or services. Following the council's strategic sourcing actions, decentralized units then execute tactical ordering against those preestablished business agreements. The commodity council concept is predicated upon maximizing the cost-reduction advantages of leveraging enterprise-level spend, using market experts to formulate sourcing strategy, and forming strong relationships with preferred suppliers (Table 8).

Perhaps against common perceptions, commodity councils have proven effective in improving customer support, increasing the quality of goods and services, and accelerating delivery responsiveness, in addition to reducing the purchase cost of commodities. By eliminating duplication of effort across the organization, minimizing supply chain costs through integration and collaboration, and leveraging the power of consolidated purchasing across the enterprise, commodity councils are able to bring both efficiency and effectiveness benefits to the organization.

The key to the commodity council approach is relying on market experts in the specific commodity that is being purchased to make well-informed, market-savvy sourcing decisions that fully meet all enterprise-wide requirements for a specific commodity. Typically, these commodity experts are from within the organization's decentralized units. In this manner, the decentralized units play an integral role in developing the commodity strategy they will later execute. This concept ensures an approach that maximizes the benefits of centralized management while retaining the flexibility and operational risk mitigation of decentralized execution.

The objective of a commodity council is to identify crucial commodities for centralized management. This process includes gathering market intelligence, developing a written sourcing strategy, and selecting suppliers based on that criterion. Individuals with an intimate knowledge of particular commodity groupings should chair the councils and appoint cross-functional representatives to their teams to ensure full-spectrum

Air Force Sustainment/Operational Spend = \$42B Annually

- If Air Force meets industry's 12% average goal, Air Force can save \$5.04B.
 - \$5.04B = 48 F-22 Raptors
 - = 127 Joint Strike Fighters
 - = 25 C-17 Globemaster IIIs
 - > Air Force Spares budget
 - > GDPs of 68 nations

When does it become meaningful?

- 12% savings in office furniture = \$11.4M
- 12% savings in IT commodities = \$710M
- 12\$ savings in trash collection = \$6.1M

Leveraged centralized purchasing power promises increased efficiency and effectiveness.

Table 7. The Potential Impact of Leveraged Centralized Purchasing Power⁹¹

Commodity Council = Cross-Functional Sourcing Team

- Develops enterprise-wide procurement strategies.
- Integrates customers and suppliers.
- Drives commonality and standardization.
- Leverages purchasing volume.

Characteristics of a Commodity council

- Executive-level endorsement.
- Well-informed and market-savvy commodity experts.
- Centralized strategy—decentralized execution.
- Eliminates duplication of effort.
- Minimizes supply chain costs through integration and collaboration.
- Demonstrates the power of leveraged purchasing.

Table 8. Commodity Council Fundamentals95

representation from across the enterprise. To ensure councils develop appropriate strategies, chosen members of the council must be experts within that particular commodity area.

Beyond the council level, the Air Force should designate a single purchasing executive to approve sourcing strategies developed by the council. This ensures a single point of responsibility and retains the appropriate acquisition authority. This executive is responsible for providing an Air Force-wide strategy for purchasing a specific commodity grouping and for ensuring decentralized units execute according to the approved strategy. The sourcing executive is accountable for ensuring the council creates and maintains appropriate supplier relationships; integrates suppliers into supply chain operations; drives commonality and standardization of requirements; leverages commodity volume across the enterprise; reduces supply chain costs; develops commodity guidelines, strategies, and scorecards; complies with all legal requirements; and determines the appropriate level of decentralized effort.

The council is responsible for developing strategies that include the number of suppliers and amount of effort awarded to each supplier; a list of required local and global suppliers; supplier development plans; supplier relationship methodology (for example, traditional and strategic alliance); contract type and length; and incorporation of socioeconomic programs. Executives should evaluate the performance of individual councils by calculating how many requirements were successfully anticipated with preestablished business

arrangements and by evaluating the performance of the commodity council's selected suppliers (that is, *you are only as good as the supplier you select*).

Conclusion

Meaningful institutional change toward centralized purchasing fundamentally can improve the Air Force's effectiveness and efficiency. Using the commercial best practice of *commodity* councils, Air Force contracting has the opportunity to transition to a construct of strategic leverage quickly while minimizing the negative impact of radical change upon overarching Air Force operations. Within today's contracting structure, the basic hierarchy already exists, which could support this recombination of people, networks, culture, processes, and structure. The senior contracting representatives within the Air Force's headquarters and major command structures could transition easily to more strategic roles if the Air Force focused the appropriate level of attention on this issue. Air Force contracting has to move beyond tactical sourcing and compliance-oriented oversight, and contracting personnel have to get in front of user's requirements and be prepared to respond to customer requirements via a quick, seamless, and transparent methodology. Immediate further study is warranted in this regard.

Creating a commodity council approach within the Air Force seems to be the best way to reach these purchasing objectives. Implementation promises to decrease the unit cost of purchases, decrease lead times, and increase Air Force purchasing flexibility. For the Air Force to become a best-in-class purchasing organization, implementation of a commodity council is imperative. Commercial best practices in purchasing have transformed to a commodity council approach in recent years, and the improvements realized have been nothing short of spectacular. Implementation of a commodity council-based purchasing strategy is imperative to the efficiency and effectiveness of the Air Force. Today, more than ever, the Air Force cannot afford to delay.

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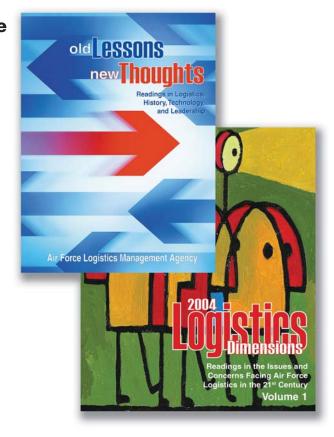
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